

Code: 2298-60208

Ref. No.: 3720-0001

JAPANESE PATENT OFFICE

PATENT JOURNAL

KOKAI PATENT APPLICATION NO. HEI 6[1994]-132474

Technical Disclosure Section

Int. Cl. ⁵ :	H 01 L 25/065 25/07 25/18 H 01 L 25/08
Application No.:	Hei 4[1992]-61636
Application Date:	March 18, 1992
Publication Date:	May 13, 1994
No. of Claims:	1 (Total of 7 pages)
Examination Request:	Not requested

SEMICONDUCTOR DEVICE

Inventors:	Hiroshi Yamada General Laboratory, Toshiba Corporation 1 Komukaitoshiba, Saiwai- ku, Kawasaki-shi, Kanagawa-ken
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Masayuki Saito
General Laboratory,
Toshiba Corporation
1 Komukaitoshiba, Saiwai-
ku, Kawasaki-shi,
Kanagawa-ken

Applicant:

000003078
Toshiba Corporation
72 Horikawa-cho, Saiwai-
ku, Kawasaki-shi,
Kanagawa-ken

Agent:

Saichi Suyama, patent
attorney

[There are no amendments to this patent.]

Abstract

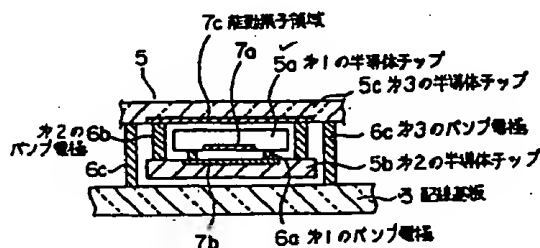
Objective

To provide a semiconductor device constituted in such a manner that it can be mounted at a high density and with a high reliability on a wiring substrate (circuit substrate).

Constitution

It is characterized by the fact that it is equipped with a first semiconductor chip 5a having a first bump electrode 6a on a bonding pad 8a; a second semiconductor chip 5b, which has a second bump electrode 6b higher than the sum of the thickness of the above-mentioned first semiconductor chip 5a and the height of

the first bump electrode 6a, on a bonding pad 8b and mounts at least one first semiconductor chip 5a in a flip-flop manner by causing the surfaces for forming active element regions 7a and 7b to face each other on the surface on which the second bump electrode 5b is formed; and a third semiconductor chip 5c, which has a third bump electrode 6c higher than the sum of the thickness of the above-mentioned second semiconductor chip 5b and the height of the second bump electrode 6b on a bonding pad 8c and mounts at least one second semiconductor chip 5b in a flip-flop manner by causing the surfaces for forming active element regions 7b and 7c to face each other on the surface on which the third bump electrode 6c is formed. A multilayer type of three layers or more is constituted.



- Key: 3 Wiring substrate
 5a First semiconductor chip
 5b Second semiconductor chip
 5c Third semiconductor chip
 6a First panel electrode
 6b Second panel electrode
 6c Third panel electrode
 7c Active element region

Claim

A semiconductor device, characterized by the fact that it is equipped with a first semiconductor chip having a first bump electrode on a bonding pad; a second semiconductor chip, which has a second bump electrode higher than the sum of the thickness of the above-mentioned first semiconductor chip and the height of the first bump electrode, on a bonding pad and mounts at least one first semiconductor chip in a flip-flop manner by causing the surfaces for forming active element regions to face each other on the surface on which the second bump electrode is formed; and a third semiconductor chip, which has a third bump electrode higher than the sum of the thickness of the above-mentioned second semiconductor chip and the height of the second bump electrode, on a bonding pad and mounts at least one second semiconductor chip in a flip-flop manner by causing the surfaces for forming active element regions to face each other on the surface on which the third bump electrode is formed.

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